

By Express Mail # EL489599589US

CLAIMS

I claim:

1 1. A transmission for a wind generator, the transmission comprising
2 a housing,
3 a rotor supported in said housing,
4 a multi-stage planetary transmission stage driven by said rotor, and
5 a spur gear stage driven by said multi-stage planetary transmission stage, said
6 spur gear stage driving at least one generator.

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8 2. A transmission as in claim 1 further comprising
9 an annular gear carrier fixed directly to said rotor,
10 an annular gear fixed to said annular gear carrier, said multi-stage planetary
11 transmission stage including said annular gear.

1 3. A transmission as in claim 1 further comprising
2 a pair of sliding contact bearings supporting said rotor in said housing, at least one
3 of said bearings absorbing axial forces,
4 an oil pump for raising said bearings hydrostatically, and
5 means for controlling said oil pump so that said bearings can be switched between
6 partially and fully hydrodynamic lubrication.

1 4. A transmission as in claim 2 wherein said rotor and said annular gear
2 carrier are formed integrally.

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1 5. A transmission as in claim 2 wherein said annular gear carrier is fitted to
2 said rotor in at least one of a form fit and a press fit.

1 6. A transmission as in claim 2 wherein said annular gear is fixed to said
2 annular gear carrier by a toothed coupling.

1 7. A transmission as in claim 1 wherein said rotor is formed integrally with a
2 rotor head which holds the blades driven by the wind.

1 8. A transmission as in claim 1 further comprising
2 a bearing cover secured to said housing, and
3 bearings for said spur gear stage supported in said bearing housing.

1 9. A transmission as in claim 1 wherein said planetary transmission stage
2 comprises gears having helical teeth.

1 10. A transmission as in claim 1 wherein said planetary transmission stage
2 drives said spur gear stage via a sun gear carried on a sun gear shaft, said sun gear shaft being
3 mounted for resilient axial movement.

1 11. A transmission as in claim 10 further comprising a sensor which records
2 the axial force of the sun gear shaft.

1 12. A transmission as in claim 2 wherein said annular gear has internal teeth
2 which are surface-hardened.

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- 1 13. A transmission as in claim 1 further comprising
2 a flanged housing surrounding said spur gear stage, and
3 at least two output shafts arranged in said housing and driving respective
4 generators, each said output shaft having a pinion gear which engages said spur gear stage.